



Attorney Docket No. HOS-62
PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of:) Group Art Unit: 1771
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MORITA; MUROI; KAKUTA) Examiner: Hai Vo
)
Serial No. 09/996,777)
)
Filed: November 30, 2001)

For: **MULTIPLE LAYERS LAMINATED POLYOLEFIN FOAM**

Appendix A

Please amend the following claims as indicated in the following claims according to the revision to 37 C.F.R. §1.121 concerning a manner for making claim amendments.

1. (Currently Amended) A multiple layers laminated polyolefin foam having a plurality of polyolefin layers laminated on at least one side of a polyolefin foam by a coextrusion method, wherein the thickness of the outermost layer constituting said plurality of polyolefin layers is 5 to 80 μm , and the density d (g/L) of said polyolefin foam, the melt flow rate X (g/10 min) of the polyolefin resin constituting the innermost layer among said plurality of polyolefin layers, and the thickness Y (μm) of the innermost layer of said plurality of

polyolefin layers satisfy the following relationships (1) to (4):

$$Y \leq 0.29 d X \quad \dots (1)$$

$$5 \leq X \leq 40 \quad \dots (2)$$

$$70 \leq Y \leq 300 \quad \dots (3)$$

$$100 \leq d \leq 300 \quad \dots (4)$$

2. (Original) The multiple layers laminated polyolefin foam according to claim 1, wherein the density d (g/L) of the polyolefin foam is 120 to 300 g/L, the melt flow rate X (g/10 min) of the polyolefin constituting the innermost layer among the polyolefin layers is 8 to 40 g/10 min, and the thickness Y (μm) of the innermost layer among the polyolefin layers is no more than $0.26dX$.

3. (Original) The multiple layers laminated polyolefin foam according to claim 1, wherein the base resin constituting the polyolefin foam and the polyolefin layers in the multiple layers laminated polyolefin foam is of at least one type selected from polypropylenes and polyethylenes.

Claims 4-14 (Cancelled)

15. (Previously presented) The multiple layers laminated polyolefin foam according to claim 1, wherein the outermost layer among the polyolefin layers in the multiple layers laminated polyolefin foam contains a polymer type antistatic agent so that the surface resistivity is no more than $1 \times 10^{13}\Omega$.

16. (Previously presented) The multiple layers laminated polyolefin foam according to claim 15, wherein the polymer-type antistatic agent comprises a compound of at least one type selected from polyetheresteramides and polyethers as the main component.

17. (Previously presented) The multiple layers laminated polyolefin foam according to claim 16, wherein the polyetheresteramide is a polymer obtained by polymerization reaction of a polyamide with an alkylene oxide adduct of a bisphenol.

18. (Previously presented) The multiple layers laminated polyolefin foam according to claim 17, wherein the polyamide is of at least one type selected from caprolactam polymer, 12-

aminododecanoic acid polycondensate, and adipic acid-hexamethylene diamine polycondensate.

19. (Previously presented) The multiple layers laminated polyolefin foam according to claim 16, wherein the polyether is a compound having at least two quaternary ammonium bases and is the reaction product of (a) an oxyalkylene ether obtained by addition reaction of an alkylene oxide with a phenol-divinyl benzene addition polymer, (b) one type of glycidyl ether selected from glycidyl ethers of polyoxyalkylene glycols and glycidyl ethers of adducts of phenols and alkylene oxides, an amine compound having an aliphatic hydrocarbon group containing 1 to 22 carbon atoms, and a quaternizing agent.

20. (Previously presented) The multiple layers laminated polyolefin foam according to claim 19, wherein (a) the polyoxyalkylene ether is an adduct obtained by the addition reaction of ethylene oxide and a copolymer of ethylene oxide and propylene oxide with a bisphenol-divinyl benzene addition polymer, (b) the glycidyl ether of polyoxyalkylene glycol is glycidyl ether of polyoxyethylene glycol, and the adduct of a phenol and an alkylene oxide is an adduct of bisphenol and ethylene oxide.

21. (Previously presented) The multiple layers laminated polyolefin foam according to claim 15, wherein the polymer-type antistatic agent is present in the outermost polyolefin layer in an amount of from 2 to 30 wt.%.

22. (Previously presented) The multiple layers laminated polyolefin foam according to claim 16, wherein the polymer-type antistatic agent is present in the outermost polyolefin layer in an amount of from 2 to 30 wt.%.

23. (Previously presented) The multiple layers laminated polyolefin foam according to claim 15, wherein the ratio (α/β) of the melt flow rate (α) of the polymer-type antistatic agent and the melt flow rate (β) of the base resin constituting the outermost layer among the polyolefin layers is at least no less than 0.5.

24. (Previously presented) The multiple layers laminated polyolefin foam according to claim 1 wherein the thickness of the entire laminated foam is 2 to 10 mm and the closed cell ratio of the laminated foam is at least no less than 60%.

25. (Previously presented) The multiple layers laminated polyolefin foam according to claim 1 wherein the thickness of

the entire laminated foam is 2 to 10 mm and the closed cell ratio of the laminated foam is at least no less than 70%.

26. (Previously presented) The multiple layers laminated polyolefin foam according to claim 1 wherein the thickness of the entire laminated foam is 2 to 10 mm and the closed cell ratio of the laminated foam is at least no less than 80%.

27. (New) The multiple-layer laminated polyolefin foam according to any of claim 1, wherein a base resin constituting the polyolefin foam has a ratio of insoluble components in boiling xylene of 0 to 10 wt%.

28. (New) The multiple-layer laminated polyolefin foam according to any of claim 1, wherein a base resin constituting the polyolefin foam has a ratio of insoluble components in boiling xylene of 0 to 5 wt%.

29. (New) The multiple-layer laminated polyolefin foam according to any of claim 1, wherein a base resin constituting the polyolefin foam has a ratio of insoluble components in boiling xylene of 0 to 2 wt%.